



# Residential Design Criteria Bulletin # 12

Department of Planning and Land Services, July 2013  
Division of Building Safety and Inspection for 2012 I Codes

This bulletin establishes the climatic and geographic design criteria used in designing buildings using the International Residential Code.

## 1. Additional Criteria Established for Climatic and Geographic Design

International Residential Code requires Table R301.2(1) to be established.

**R301.2 Climatic and geographic design criteria.** Buildings shall be constructed in accordance with the provisions of this code as limited by the provision of this section. Additional criteria shall be established by the local jurisdiction and set forth in Table R301.2(1).

**Table R301.2(1)**

Ground Snow Load	Wind Design		Seismic Design Category	Subject to Damage From			Winter Design Temp <sup>e</sup>	Ice Barrier Underlayment Required <sup>h</sup>	Flood Hazards <sup>g</sup>	Air Freezing Index <sup>i</sup>	Mean Annual Temp <sup>j</sup>
	Speed (mph)	Topographic Effects <sup>k</sup>		Weathering <sup>a</sup>	Frostline Depth <sup>b</sup>	Termite <sup>c</sup>					
30	85	No	D1 / D2	Moderate	See Map	Slight to Moderate	26	No	*SEE BELOW*	50	50

-Flood Hazards info.

\*Adoption; 8/19/87 by ordinance 87-121s

\*FIRMs and FIS dated 9/19/87 except panel 0350 was re-issued 8/4/88.

\*138 panels (# 0025 to 1375) all dated 8/19/87 except panel 0350 which was issued on 8/4/88.

-See body of IRC for footnotes.

### **A Ground Snow Loads Established**

**IBC 1608.2 Ground Snow-loads. ???????**

### **B Wind Design Criteria Established**

IRC Figure R301.2(4)A The Wind Speed to be used in determining the design wind loads for buildings and portions thereof for Pierce County shall be 85 mph. The conditions in which IRC requires an alternate wind speed are not typically found in Pierce County. Therefore, wind design need only be established in rare cases

**Exposure A.** Large city centers with at least 50 percent of the buildings having a height in excess of 70 feet (21 336 mm)

**Exposure B.** Urban and suburban areas, wooded areas, or other terrain with numerous closely spaced obstructions having the size of single-

family dwellings or larger. Exposure B shall be assumed unless the site meets the definition of another type exposure.

**Exposure C.** Open terrain with scattered obstructions, including surface undulations or other irregularities, having heights generally less than 30 feet (9144 mm) extending more than 1,500 feet (457 m) from the building site in any quadrant.

**Exposure D.** Flat, unobstructed areas exposed to wind flowing over open water for a distance of at least 1 mile (1.61 km).

### **C Seismic Design Categories Established**

All of Pierce County is Category D1. The area of Pierce County abutting Kitsap County is designated D2 on the IRC map. However, by calculation the increase in seismic acceleration is only 1.5% more than D1.

### **D Soil Site Class Established**

All of Pierce County will be assumed to be soil Site Class D.

**Exception:** Sites in a critical area requiring a geotechnical assessment or report shall be required to provide soil Site Class information and a seismic category evaluation.

### **E Soil Load-Bearing Values**

Assume 1500 psf unless a soils report is provided.

### **F Declare Prescriptive Path**

IRC has four prescriptive paths for building construction. The submitted *construction documents* must clearly note which option the plans have been designed to.

The options are:

- ✓ International Residential Code, 2012 Edition,
- ✓ AF&PA Wood Frame Construction Manual (WFCM)
- ✓ AISI Standard for Cold-Formed Steel Framing - Prescriptive Method. (AISI S230)
- ✓ ICC-400 Standard on the Design and Construction of Log Structures.

Where engineered design is used in conjunction with these standards, the design shall comply with the *International Building Code*.